



Ballistic Missile Defense System Interceptors

The Missile Defense Agency (MDA) is developing a Ballistic Missile Defense System (BMDS) that destroys enemy ballistic missiles in all phases of flight – boost, midcourse, and terminal. The BMDS Interceptors program's primary objective over the next few years is developing an interceptor capable of destroying Intercontinental Ballistic Missiles (ICBMs) and Intermediate-Range Ballistic Missiles (IRBMs) while their booster rockets are burning. Destroying these missiles early in their flight is most desirable since they cannot release their lethal warheads and countermeasures until powered flight is complete. The longer-term objective is to develop an interceptor that can kill ballistic missiles in the midcourse phase of flight.



MDA is using an evolutionary development approach to build and test these new interceptors. The first generation of these interceptors, called the Kinetic Energy Interceptor (KEI) element, will be built and launched from portable launchers that can be driven up close to the border of the threatening nation. We call this Block 10 Capability since it will be tested fully between 2010 and 2011. Over time, MDA will integrate the missile into a sea-going vessel. In December 2003, MDA awarded a contract to Northrop-Grumman to develop and test the KEI element.

The configuration of the Block 10 system includes three components: an interceptor, a launcher and a Command, Control, Battle Management and Communication (C2BMC) capability. The interceptor has multiple stages and reaches high velocity very quickly in order to strike and knock down an enemy missile while its engine is burning. The launcher is ground mobile, air transportable, and carries two interceptors housed in separate canisters. The C2BMC equipment is also mobile and interfaces with the rest of the Ballistic Missile Defense System.

Near-Field Infrared Experiment

The objective of this experiment is to reduce the development risk of the KEI element by viewing a burning ballistic missile at close ranges in conditions truly real world. The data it collects will support KEI kill vehicle hardware and algorithm development and boost phase plume models and simulations.